

*Kinderheilkunde*, 1890, p. 244; and Oeltinger, in *La Semaine Médicale*, No. 46, 1890.—*Reporter*.]—*Meditzinskoie Obozrenie*, No. 23, 1890, p. 992.

VALERIUS IDELSON (Berne).

## OPERATIVE SURGERY.

I. A New Method for Resection of the Elbow-Joint. By DR. C. ZATTI (Bologna, Italy). The author, after considering the advantages and disadvantages of the different methods (Erichsen's, Koenig's, etc.), describes his own new method, which is as follows: The inferior extremity of the humerus is sawed through obliquely so as to resemble the adjusting surface of the corner of a picture frame, and with its surface looking downward and forward. Then the superior articular extremities of the bones of the forearm are sawed through, also in an oblique manner, to form the other adjusting frame-like surface, the latter looking upward and forward.

The surfaces of the bones are now joined, the forearm being placed in a position of semi-pronation and semi-flexion, so that the forearm rests now at a right angle upon the arm. The particulars of the procedure are: The postero-longitudinal incision is made, followed by separation of the soft parts and the periosteum; the articular extremities are then exposed and dislocation produced, after the method of Langenbeck, the humerus being fixated by an assistant.

A line is drawn which unites the lowest point of the external condyle with the lowest point of the internal condyle. This horizontal line divides the posterior inferior articular surface of the trochlea in its median part.

After this line has been marked out, the saw is conducted through it, being held obliquely, so as to bring it out anteriorly at the inferior border of the coronoid cavity. Thus a surface is obtained which forms with the longitudinal axis of the humerus an acute angle of 45 degrees. If, however, the morbid process should involve more than the articular processes, the resection may be practiced more extensively, with the same facilities and equal results. As regards the bones of the

forearm, the saw is applied about  $1\frac{1}{2}$  cm. below the apex of the olecranon, and carried through obliquely below the articular cartilages of the glenoid and sigmoid cavities to come out at the base of the coronoid process of the head of the radius. One obtains, thus, a surface, which forms with the longitudinal axis of the forearm an acute angle of 45 degrees. Through the above procedure two ample section-surfaces result, which can be well adapted to each other and permit the forearm to rest solidly upon the arm at a right angle. In cases where the junction of the two surfaces is not sufficiently secure, this may be assisted by sutures which are to be introduced at the apex of the angle to be formed. It often happens that one of the surfaces overlaps the other posteriorly. In such cases the osseous projection must be removed in order to avoid irritation of the soft parts, which may cause gangrene. It is, also, of importance to saw through the articular extremities, while an assistant is holding the forearm in a position of semi-pronation, as this position is the most favorable as regards the function of ankylosed forearm.

The author finally remarks that this method of resection of the elbow-joint perhaps has been used by other surgeons, here and there, but as he has not found it stated in the textbooks, he thought it not inopportune to put it on record.—*Gazzetta Degli Ospitali*, XI, No. 105, p. 834, 1890.

A. PICK (Boston).

**II. Total Resection of the Carpus by the Dorsal Method; Metallic Suture of the Bones of the Metacarpus with Those of the Forearm in the Treatment of the Fungous Synovitis of the Carpus.** By DR. R. GRITTI (Italy). The writer proposes a method of performing total resection of the carpus in fungus of the carpal bones. The technique of the operation is as follows:

The hand is washed carefully and rendered aseptic, the patient anesthetized and an elastic ligature applied above the elbow. Two lateral incisions are made on the dorsum of the hand, one on the radial side, corresponding to the border of the second metacarpal bone, and

the other on the ulnar side. They should extend from two centimetres above the lower end of the radius and ulna to two centimeters beyond the heads of the metacarpal bones. These two incisions are then united by a central one running across the dorsum of the hand and forming with two preceeding ones an H. This third incision severs the skin, the tendons of the second, third, fourth and fifth fingers from the extensor communis digitorum, that of the extensor proprius indicis, and extensor minimi digiti, and the nerves and veins of that region. The extensor longus pollicis is not cut, the tendon being drawn aside by means of a hook. The radial and ulna muscles are cut and left to themselves. This done, the severed tendons are separated into groups; firstly, the tendons of the extensor proprius indicis; secondly, those of the extensor communis digitorum of the second, third, fourth and fifth fingers, and thirdly, that of the extensor proprius minimi digiti. Sutures are drawn through their ends in order that they may later be reunited without mistake. The ends of the radius and ulna are then sought for and sawed across slightly above the epiphyses, the saw being held a little more removed from the radius than the ulna. This must be done with great caution, in order not to wound the arteries and tissues beneath. The metacarpus is then cautiously detached in one single mass, care being taken not to open the sheath of the flexors or impinge upon the two radiopalmar arteries and the two palmar arteries. The pisiform and the unciform bones may be either enucleated or cut in two. On arriving at the trapezium the knife should be kept well up against the carpus in order not to open the articulation of the trapezium, with the first metacarpal, but be thrust in between the trapezium and trapezoid bones. Then the thumb with the carpometacarpal articulation remains undisturbed. Finally, the carpus is cautiously detached from its attachments below as far as one centimetre above the carpo-metacarpal articulation; the heads of the second, third, fourth and fifth metacarpal bones are sawed straight across and the carpus removed in one piece. The attending hæmorrhage is usually but slight, as the palmar vessels remain uninjured. The surface of the wound is cleansed and, if any sinuses or articular fungosities be present, they are curetted. The surfaces of the resected bones

are then placed in contact and united by two metallic sutures, the ulna being joined to the fourth metacarpal and the radius to the second metacarpal bone. The ends of the tendons are then brought together and joined; firstly, the tendon of the extensor indicis, then those of the extensor communis digitorum, and, finally, that of the extensor minimi digiti. The tendons are not joined by simply bringing their cut surfaces together but by over-lapping the ends by two centimetres. In this manner they are somewhat shortened, as the hand has lost some six centimeters in length. The wound is then closed, sutured and drained. After an antiseptic dressing has been applied the forearm is placed upon a well padded splint, while the hand is elevated by a cushion. The operation generally lasts an hour and does not present any especial difficulties. After the operation there is, as a rule, tactile insensibility of the dorsum of the hands and fingers. The writer then gives the details of three cases operated on, more or less successfully, by his method, and makes the following deductions:

1. The blood supply of the hand is not disturbed, as the arterial trunks running on the palmar surface of the hand are not cut.

2. The movements of extension of the fingers make their appearance generally about the tenth day. The movements of flexion are uninfluenced, although the hand is shortened about six centimetres.

3. The tactile sensibility, which is destroyed by the operative procedures, begins to be restored even before movements of the fingers are possible. It first appears in the cutis of the fingers and progresses up the hand.

In one case it appeared ten days after the operation.

4. Bony ankylosis probably does not take place, but rather is a pseudo arthrosis formed, which is more to be desired as the freedom of movement of the hand is thereby greater than if an osseous fusion with immobilization would take place.

In the first two cases operated on, there resulted an abduction of the hand, due to sawing the lower ends of the radius and ulnar straight across. Hence, the writer recommends holding the saw somewhat obliquely, in order to remove more from the head of the radius than from the ulna.—*Gazzetta degli Ospitali*, No. 12, 1891.

F. H. PRITCHARD (Boston).

**III. The Use of Plates Made of Raw Potato in Intestinal Anastomosis.** By R. H. M. DAWBARN, M.D. (New York). The author, as the result of many experiments on dogs, is satisfied that plates cut from raw potato are the best aids to intestinal anastomosis, whether for emergency work or for that performed after deliberation. For use in the human gut the plates should be made about one-third of an inch in thickness, possibly a trifle thicker. To prevent the thread from cutting through, it should be very coarse, should have a large knot, and before passing it through the plate, the thread should be passed through a bit of rubber or cloth. The plates should be so long that the opening shall be about twice the normal diameter of the gut to be operated upon, for ultimate contraction of the new hole to even half its original size is to be expected. Such a raw potato plate is very rigid, and retains its rigidity considerably longer than any of the catgut ones. It should not be immersed in a carbolic solution before use as this tends to make it soften more quickly. The peeled potato is improved by being soaked in water for an hour or two before being used, as it is somewhat hardened by the process.

The author describes certain modifications in the technique of intestinal anastomosis. He leaves open the two ends of the intestine between which the anastomosis is to be made until after the plates have been introduced, their anchor-stitches passed and tied so as to secure the desired apposition of the intestinal walls by the approximation of the plates. He then further secures the intestines together by two rows of stitches passed around the periphery of the plates, the first introduced so as to cover in the anchor stitches, and the second so as to cover in equally the first row. For these lines of suture he used a continuous basting stitch, the needle being passed longitudinally, making about three stitches to the inch. The attachment of the two lower walls to each other having been thus fully secured, then and not till then he makes the anastomotic opening. To do this he inserts a thin plate of wood into the open end of one bowel so that it shall be applied over the opening in the plate, and then with a knife introduced through the open end of the other bowel, he incises the two apposed bowel walls as freely as the opening in the plates will allow by cutting

through upon the wood, which guards against damage from the point of the knife. The adequacy of the suturing should now be tested hydrostatically, and if all is satisfactory, the open ends of the anastomized bowel are closed by inverting them and suturing. He also recommends for the purpose of hastening and increasing the amount of plastic exudation that the peritoneal surfaces that are to be brought into contact should be well scraped with a scalpel before any sutures are tied.—*Med. Record*, 1891, June 27, p. 725.